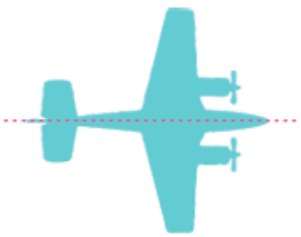
Reflection Symmetry / Line Symmetry

Understanding the Topic

- Reflection symmetry (also called line symmetry) happens when one half of a figure is a mirror image of the other half.
- The line that divides the figure into two equal halves is called the line of symmetry.
- The two sides of the shape look exactly the same after folding along the line of symmetry.
- A figure can have one, more than one, or no lines of symmetry.
- Letters like A, M, H and shapes like square, circle, and triangle can show line symmetry.

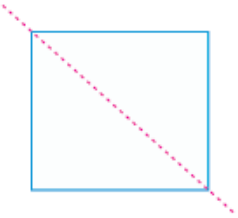
Important Points to Remember

- The line of symmetry can be vertical, horizontal, or diagonal.
- Some shapes like circles have many lines of symmetry.
- Not all figures have symmetry (example: letter F).
- Folding along the line of symmetry gives two matching parts.
- Symmetry is useful in design, drawing, and nature patterns.



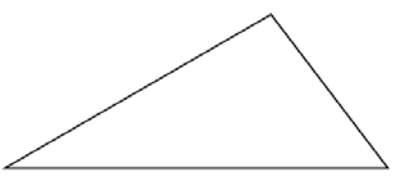
Horizontal line of symmetry

Vertical line of symmetry

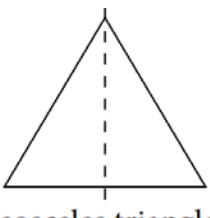


Diagonal line of symmetry

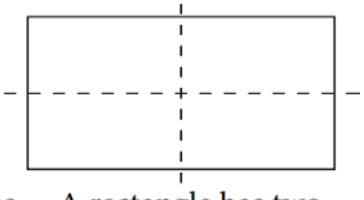
Let us understand with some examples:



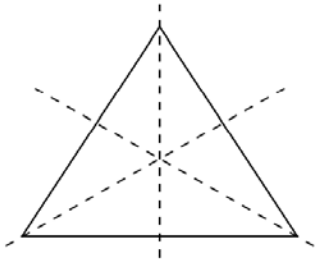
A scalene traingle has no line of symmetry.



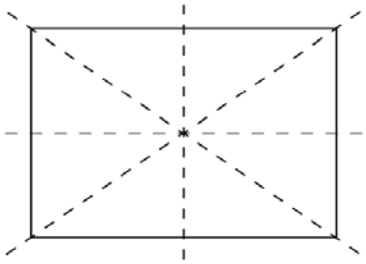
An isosceles triangle has one line of symmetry.



A rectangle has two lines of symmetry.



An equilateral triangle has three lines of symmetry.



A square has four lines of symmetry.

Summary Points

- Symmetry means mirror-like balance in shapes.
- The dividing line is called the line of symmetry.
- Line symmetry can be vertical, horizontal, or slanted.
- Shapes with symmetry look the same on both sides of the line.
- Symmetry helps in art, design, and real-world objects.